

# Land policy REVIEW

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UNITED STATES DEPARTMENT OF AGRICULTURE  
BUREAU OF AGRICULTURAL ECONOMICS



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## Private In-Holdings in National Park System

By NEWTON B. DRURY. *The Director of the National Park Service gives to our readers a clear statement of an old problem in regard to the parks, together with his ideas as to the solution.*



THERE ARE approximately 21,000,000 acres of land within the established boundaries of our national parks, monuments and historical areas, or less than 1 percent of the total area of the United States, Alaska, and Hawaii. Of this acreage approximately 600,000 acres are "valid existing claims" in the form of State or private in-holdings. Since the owner of lands in a park or monument has exactly the same rights as a landowner anywhere, there is nothing to prevent him from despoiling his land, from a park standpoint, by establishing undesirable developments or removing his timber or using his land in such fashion as to deplete it or cause damaging erosion, the effects of which may extend beyond his own boundaries.

Often these lands are of strategic importance to the development of the area. Road and trail construc-

tion may be complicated by them; access must be provided to them; and the danger of fires spreading from them is ever present. Though these in-holdings represent only 2¾ percent of the gross area of the System, the handicap they impose is out of all proportion to their extent, and the problem they create is one of the most serious facing the National Park Service.

The act of August 25, 1916, which created the National Park Service, states in part:

"The Service thus established shall *promote and regulate* the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified by such *means and measures* as conform to the *fundamental purpose* of the said parks, monuments and reservations, which *purpose* is to *conserve* the scenery and the *natural and historic objects* and the *wildlife* therein and to *provide for the enjoyment* of fu-

ture generations." [Italics supplied.]

The 169 areas which comprise the National Park System today, have been established individually by Congressional action, by Presidential proclamation under authority of the Antiquities Act of June 8, 1906, by order of the Secretary of the Interior under the Historic Sites Act of August 21, 1935, or by transfer from other Federal agencies. All action to establish these areas has been subject to "valid existing claims."

Private holdings within the National Park System divide into three main categories: (1) State-owned lands—150,000 acres; (2) railroad-owned lands—150,000 acres; and (3) other privately owned lands—300,000 acres. The problems created by each type of ownership and, I believe, their solution, are generally distinct and separate. I shall endeavor to picture these problems and to give my ideas for their solution in the light of present-day economic and social concepts.

### *State-Owned Lands* *150,000 Acres*

There are State-owned lands in 26 of the 169 areas in the System. The most prominent examples are in Glacier and Carlsbad Caverns National Parks and Dinosaur, Great Sand Dunes, Joshua Tree, Saguaro, and White Sands National Monuments.

The acts of Congress by which most of our public-land States were admitted to the Union reserved for common-school purposes from two to four sections in each township where surveyed, or provided for indemnity selections in surveyed land for those sections that were unsurveyed townships. Provisions were

made whereby such sections, if they happened to fall in subsequent Federal reservations, such as national parks and monuments, could be exchanged for public domain outside of the reservations.

Accordingly, many thousands of acres of the States' holdings within the National Park System have been exchanged and other exchanges are now pending. Because of previous exchanges made by the States, and other public-land utilization, the public land available for exchange has decreased until it has become more difficult to consummate exchanges. There are available for exchange, however, on a value basis, many thousands of acres under the provisions of section 8 of the Taylor Grazing Act of 1934, as amended in 1936.

Perhaps the State ownership in the System that best illustrates the problem confronting the National Park Service is the 10,000-acre stand of virgin Ponderosa pine just west of the continental divide in Glacier National Park. Montana was admitted to the Union in 1889, and by 1910, when Glacier National Park was created, had exchanged land in other reservations or accepted indemnity selections for unsurveyed sections elsewhere in the State, until it had acquired these 10,000 acres of contiguous fine timber—almost the last of the species in this vicinity. Over a period of 30 years a number of attempts have been made to exchange public land outside of the park for the State's holdings inside. All efforts so far have been unsuccessful.

Recent inflated values of lumber have increased the threat that the timber on the State's holdings will be cut. Because of this increased

threat it has been suggested by friends of conservation in general, and of the National Park Service in particular, that Congressional action be taken toward appropriating Federal funds to purchase the State's holdings. I would not favor this if the situation can be handled in any other way. While our national parks and monuments are of inestimable importance to the people and the Nation, they are also great economic and social assets to the various States. I feel, therefore, that Montana should not despoil Glacier National Park, one of its greatest assets, by cutting the timber from its State holdings within the park boundaries, but that it should cooperate in maintaining the park unimpaired for the people, as intended by the Congress.

Many of the States have recognized the great value of national parks and monuments within their boundaries and have made an all-out effort to acquire the requisite lands for donation to the United States. Many have spent large sums that they might have national parks within their borders. Virginia expended nearly \$2,000,000 of State and donated funds to acquire approximately 175,000 acres of land for Shenandoah National Park. North Carolina and Tennessee expended approximately \$8,000,000 of State and donated funds in acquiring approximately 380,000 acres for Great Smoky Mountains National Park. Kentucky expended approximately \$1,000,000 of State and donated funds to acquire approximately 32,000 acres for Mammoth Cave National Park. Only recently Texas expended over \$1,700,000 in acquiring nearly 700,000 acres for Big Bend National Park. Florida

has acquired approximately 1,200,000 acres for the proposed Everglades National Park, and Kentucky, Tennessee, and Virginia will probably spend over \$750,000 for about 15,000 acres for the proposed Cumberland Gap National Historical Park. These are just a few examples.

I believe that the solution to this problem rests chiefly with the people of the States in which our parks and monuments are located. One or more of three possible steps might be taken by the people through their elective or appointed officials: (1) review the possibility of exchange with a greater emphasis on preserving the park areas as an existing asset for posterity; (2) obtain legislative action toward donating their holdings for addition to the park or monument areas; or (3) obtain legislative action whereby the use of the State-owned land in park or monument areas would be restricted to conform to the purpose of the 1916 act, even though actual title remained in the State. The people of these States, if they took any of these steps, would make a significant contribution to the Nation as well as to themselves.

### *Railroad-Owned Land 150,000 Acres*

Under various land grant acts, several of our western railroads acquired over 132,000,000 acres of the public domain as an incentive to railroad construction. More than 500,000 acres were within the later established national parks and monuments, chiefly Grand Canyon and Yellowstone National Parks and Joshua Tree, Grand Canyon, and

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# Harmony

*For thou shalt be in league with the stones of the field; and the beasts of the field shall be at peace with thee.*

—THE BOOK OF JOB

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Wupatki National Monuments. About 350,000 acres of this latter figure were released pursuant to the Transportation Act of 1940, leaving 150,000 acres within the System today, 135,000 acres of which lie within the boundaries of Joshua Tree National Monument in California.

These lands lie in checkerboard fashion, being alternate sections throughout the western or surveyed end of the Joshua Tree area. There has been some recent activity by real estate promoters to acquire some of the railroad-owned land for desert homesites. I am happy to say, however, that the Southern Pacific Railroad has been cooperative, and that the National Park Service, by initiating action whereby the railroad-owned land may be exchanged for public land of equal value outside the monument boundaries, has forestalled, so far, the sale of most of the railroad-owned land to the real estate promoters. A measure now before Congress would diminish this problem by revising the boundaries of the monument, thus eliminating considerable acreage of mineralized land, both private and Government-owned, which is of minor scenic or scientific importance.

The national parks and monuments drew more than 21,000,000 visitors in 1941, the last year of pre-

war travel. This figure was then the largest in the history of the National Park Service. A considerable increase is indicated for 1946. Our railroads, particularly the western lines, have profited and will continue to profit from such travel. Joshua Tree National Monument, if allowed to continue "to provide for the enjoyment of future generations," will contribute increasingly to satisfaction of the desire of Americans to visit the open spaces.

It seems to me that the answer to the problem of railroad inholdings would be for the railroads to take full advantage of exchange possibilities under existing law. They stand to gain twofold—by obtaining land of equal value and by adding to long-time profit possibilities by the preservation of parks as an attraction to travel.

## *Privately Owned Lands 300,000 Acres*

The privately owned lands in the National Park System, involving some 3,000 individual ownerships, vary from lots to subdivisions, from homesites to ranches, from cabinsites to resorts, from soft-drink stands to cafes and night clubs, from automobile "graveyards" to sawmills and gravel pits. All are alien

to the concepts of our national parks, monuments, and historical areas; many are eyesores and all present grave problems of administration and protection.

Perhaps the most troublesome type of private holding is the subdivision. Few people realize that there are real estate subdivisions in Glacier, Kings Canyon, Lassen Volcanic, Olympic, Rocky Mountain, and Yosemite National Parks. Buildings have been constructed on them with little regard for design, sanitation, or fire protection. Many lots have been sold and resold several times; others have been abandoned and become tax delinquent. They present a sorry picture to visitors who may easily get the impression that such areas are sponsored by the National Park Service.

There are many types of commercial establishments on privately owned land in the System. Typical of these are taverns, dance halls, and souvenir stands. Many are poorly supervised. Many of the buildings are dilapidated and constitute fire hazards. None can, by any stretch of the imagination, be considered proper from the standpoint of the purposes of the 1916 act.

There are three methods of approach in acquiring the privately owned lands in the national parks, monuments and historical areas—donation, exchange, and purchase.

### *Donation*

Many thousands of acres of land have been donated by public-spirited persons for addition to the National Park System. These include both individual tracts and thousands of acres that have been bought by

private citizens for donation to the United States. There are undoubtedly some private owners who have been wavering over the idea of giving their holdings. Such gifts would be most welcome, although we do not presume to indicate what individuals should do with their own property. The most we can do is to dissuade them, within reasonable limits, from using it adversely, pending its acquisition.

### *Exchange*

Exchange has not been used extensively in the past. Certain exchanges have been consummated, however, whereby the United States obtains title to small privately owned holdings for timber or mineral privileges on Federal land within the area. From the nature of such exchanges it can be readily understood why they have been small and will be kept so in the future.

Recently the Service has sponsored legislation to provide for exchanges of Federal lands *within* our parks or monuments for private in-holdings on a value basis. If enacted, this measure would probably not decrease the acreage of the in-holdings appreciably, but would allow the Service to acquire certain strategic parcels that are now holding up needed developments or to remove developments that are unsightly or unsanitary, or are fire hazards. The passage of this legislation would be a notable step forward in the administration and protection of the National Park System.

### *Purchase*

In spite of a certain amount of wishful thinking to the contrary,



much of the privately owned lands may have to be bought with Federal funds if they are to be acquired for public use. So far, purchases have mostly been made piecemeal. Just before the depression some lands were bought on a 50-50 basis, 50 percent being Federal and 50 percent being donated funds. During the depression some lands were bought with emergency funds and were later made a part of the System. A \$350,000 item in the 1947 appropriation bill for the Interior Department, for land acquisition to be expended anywhere in the System, was not passed by Congress. It is believed that the principle involved in the item, if once established, would be of greater advantage to the Government than the present method of

making appropriations for the purchase of specified properties.

To summarize: The most serious in-holding problems in the National Park System today are those created by the State-owned lands in Glacier National Park, the railroad lands in Joshua Tree National Monument, and the real estate subdivisions in several of our western national parks. The solution of these and all in-holding problems rests chiefly in the realization, by all of our people, that the national parks, monuments, and historical areas are vital economic and social assets to the Nation, and that the Government holdings within their boundaries should be unified and complete. There are indications that we are awakening to this realization and will translate it into action.

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*Over those parts of the earth not covered by water lies a thin crust of soil, perhaps equal by comparison to the thickness of a sheet of tissue paper wrapped around a globe six feet through. Much of this soil is inaccessible for cultivation, or it is unusable for other reasons. From the rest, the world's growing population, now more than two thousand million, must draw all their sustenance except what they get from the sea; and even the fishes, like all other living things, are fed in the final analysis out of the fertility of the land. Whether this thin layer of soil is to be a wasting asset or one maintained in perpetuity and made more fruitful for mankind will depend on how it is used and managed. Nothing more deeply concerns the well-being of men and nations. FAO is dedicated to furthering good use and good management, in all ways and by all peoples, of this most basic of man's resources.*

—From Report of UNITED NATIONS INTERIM COMMISSION  
ON FOOD AND AGRICULTURE



# Solving Secrets

## OF THE Soil

By Sir E. JOHN RUSSELL. *Rothamsted's centenary aroused a wish to learn more for our readers about its work in soil science. We asked to hear and had this quick response straight from the former Director of the Experimental Station himself.*



LAWES AND GILBERT started the Rothamsted Experiments in Britain over a hundred years ago, but it was some time before they concerned themselves with the soil. Their interest was in the food of plants, recently discovered by chemists and botanists. They showed that when these foods were applied in the form of fertilizers they usually increased the yields. Labor was cheap and abundant and prices were relatively high, there was no need to economize on fertilizers. A generous dose was given and the extra crop paid for it. If there were a certain overdose, no great harm was done.

The first soil work at Rothamsted—Britain's famed Soil Experimental Station in Hertfordshire—was in the 1880's. In British conditions the most uniformly effective fertilizers are those supplying nitrogen; the commonest were and still are sulphate of ammonia and nitrate of soda. There is no great difference between them though nitrate of soda is rather quicker in action and rather more effective. The actual plant food was found to be in the nitrate, and in the soil the ammonia

rapidly changed to nitrate. This conversion is not easy in the laboratory at ordinary temperatures, and how it took place in the soil was for long a mystery. Finally two French chemists showed that it could be brought about in the laboratory by bacteria. Warington at Rothamsted showed that, in the soil, bacteria were also responsible. For the first time it was realized that soils contained a multitude of minute living organisms occupied in making plant food.

Meanwhile British agriculture had fallen on evil days, and farmers could no longer afford their easy-going methods. Fertilizers had to be used with the strictest economy and Dyer at Rothamsted set out to find a way of discovering by chemical analysis whether a soil really needed potash or phosphate. He devised a method that worked and is still used. Its basis was purely empirical. When A. D. Hall succeeded Lawes and Gilbert at Rothamsted in 1902, he started investigations on soil analysis on a sound scientific basis. At that time it was recognized that the potash and phosphate existed in the soil in a variety of minerals, some of which were very resistant while others were easily decomposed; it

was only the latter that were of much use to the plant. Hall soon discovered that there was no hard-and-fast line between these two groups; one acid would extract a certain quantity of phosphate and potash, another would extract more. If the conditions varied the amount extracted also varied.

### *Soil Surveys*

But the problem was more complex, for plants varied in their ability to take up potash and phosphate. In short, there was no such thing as an absolute amount of available potash or phosphate in the soil; what was available to one plant was not necessarily available to another. A solution of the difficulty was found. It was rather round-about, but typical of the methods scientists often have to use in their work. Hall knew about the excellent soil surveys being made in the United States. In conjunction with the present writer he made a survey of the soils of South-East England using both chemical and physical methods. On similar soils there was a relation between the chemical analysis and the response to fertilizers: if a certain acid extracted 0.015 percent of phosphoric oxide from a soil known to respond to phosphatic fertilizer, then it is safe to assume that another soil of the same type containing the same or a less amount would also respond to the phosphatic fertilizer.

So it was recognized that the areas of similar soils should be mapped, that field experiments should be made to discover the response of crops to fertilizers, and that the crop results should be related to the analytical data. On

this basis it has been possible to advise farmers with a good deal of certainty about their manuring, and the method is widely used in the United Kingdom.

### *Analysis Improved*

Soil analysis has recently been much developed at Rothamsted in a remarkable investigation by E. M. Crowther on the manuring of sugar beet. Manurial experiments are made throughout the sugar-beet regions and also extensive soil analysis by new and improved methods. The results hang together remarkably well and in consequence the advice on the manuring of sugar beet can now be given with much greater confidence than before.

Meanwhile the older work on soil bacteria had been resumed. It was found that soil was continuously taking up oxygen and giving out carbonic acid gas and that this action was mostly due to living organisms. More fertile soils usually absorbed oxygen more rapidly than those less fertile, indicating that their bacterial activity was greater. When the bacteria were killed by sterilization, oxygen absorption became much less, but when the soil was partially sterilized, thus killing active organisms but not spores, and conditions then made favorable for the germination of spores, the oxygen absorption greatly increased as did bacterial numbers. It was found that the natural untreated soil contained large numbers of protozoa which feed on the bacteria and keep their numbers down; these are killed by partial sterilization.

### *Tumult in Soil*

As the methods of investigation improved the numbers of living

organisms in the soil were found to be vastly greater than had been supposed. Hutchinson's first counts at Rothamsted showed about 5 to 20 million bacteria per gram in the farm soil (there are about 28 grams to an ounce). The latest methods of H. G. Thornton show about 1,000 times this number. So also the numbers of protozoa revealed by modern methods are considerably greater than by the earlier methods.

What is perhaps more remarkable is that the numbers instead of remaining fairly steady are continually changing even in the course of an hour. The turmoil in the quiet-looking soil is something unimaginable to our sober minds. In addition there are moulds, actinomycetes, and other vegetable organisms besides an extensive animal population ranging from rodents downward: earthworms, insects, nematodes, etc. This amazing population is supremely important in the soils because they are the makers of humus and of plant food.

### *Mosaic of Knowledge*

Humus, formed from decaying plant material, contains all the elements of plant food, but its more important properties are that it helps to hold moisture and plant food and to build up the soil particles into crumbs. Its chemical composition and constitution are complex and difficult to determine, as many scientists in many countries have found out. A vast mosaic of knowledge has grown up; in its accumulation Rothamsted has played its part.

But humus is not the only sticky substance in the soil; there is another

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## *Demanding*

*No other profession requires such a variety of learning, such an insight into Nature, such skill of a technical kind in order to be successful, as the profession of farming.*

—HARVEY W. WILEY

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of equal importance, the clay. This is mineral; chemically it is entirely distinct from humus but it has two properties in common with humus which give it its agricultural importance—its ability to hold water and plant food and its power to build up the soil particles into crumbs. It is impossible to exaggerate the importance of crumb formation in soils. Soil crumbs represent life to the plant and the soil; when they fall down to dust it means death, for the dust is easily blown or washed away and then soil erosion sets in.

### *Water Relations*

Soil erosion is not a problem over most of England but the power of the crumbs to hold water is, for although we have no arid regions our crops often suffer from partial drought. The water relations of our soils are therefore important from the practical point of view, but equally so from the scientific, for they are essential to an understanding of the structure of the soil. B. A. Keen took the subject up when he came to Rothamsted. It was then

usually supposed that capillarity was chiefly concerned in regulating the relations of soil to water, but he showed that this was not so, and he, and later colleagues, found more accurate, though more complex, explanations.

### *Crumb Studies*

Crumb formation is of such vital importance in the soil that many scientists are trying to find out all they can about it. The weather has something to do with it, especially the winter freezing and thawing. Bacteria have an active part. Plant roots are effective, particularly those of grass and clover, as has been observed in the United States. At Rothamsted Laboratory studies of the processes involved have been made by E. W. Russell. The work is complicated by the fact that soil particles can also agglomerate in another way and form clods which behave quite differently from crumbs. They are not at all what the farmer wants though he may easily get them if he cultivates wrongly.

### *Deep Ploughing?*

While the scientific work goes on slowly and quietly the scientist has a responsibility to the farmer. The great purpose of cultivation is to make a good seed bed and to get what the farmer calls a good tilth. This involves good crumb formation; a bad tilth is more of the nature of clod formation. B. A. Keen started the work of finding the effect of the various operations. Cultivation in Britain an ancient art and its different operations have developed empirically; meanwhile the implements have changed out

of all recognition. Are the time-honored methods all necessary today in our new conditions and with our modern implements?

### *Finding Out*

Frequent surface cultivation used to be regarded as desirable, but Keen could find no good effects apart from the killing of weeds. At present, E. W. Russell is making large-scale experiments in deep ploughing. In the old days it was an article of faith that deep ploughing was essential, especially on heavy soils. With the heavy implements then in use, Britain's heavy loam and clay soils were often very productive, but the ploughs needed some six to eight horses to draw them. There were in general only two crops on arable clay soils, wheat and beans, so the ploughing was usually done to the same depth each year. In consequence, a hard layer called a plough sole was formed below the surface at the usual depth of ploughing. This often interfered with drainage and had to be broken up to get the best results—and so grew up faith in deep ploughing.

But that has all changed now. The heavy clays are more and more put into grass, and modern ploughs do not make such drastic plough soles as the old ones, though modern tractor wheels do a great deal of serious compacting. Is deep ploughing still beneficial? The extensive field experiments now being made will furnish the answer.

Soil science has already done much to help agriculture and it will do much more. The combination of field work and laboratory investigations proceed slowly, but it is the surest way to success.

# LESSONS FROM *Rural* *Rehabilitation Experience*

By OLAF F. LARSON. *Now that we have had a full decade of experience in rehabilitation among our rural people, it is time to take stock of goals visualized, methods used, and lessons learned. Moreover, these experiences may have new and extended value in connection with work now to be done in war-depleted countries the world over.*



WHAT LESSONS may be learned by looking back at the Nation's experiences during the past decade with rural rehabilitation programs? What issues are involved in deciding the role of a rehabilitation program as an instrument of postwar national agricultural policy? Answers to these questions were among the purposes of a comprehensive study recently completed of the standard rehabilitation loan program administered by the Farm Security Administration and its predecessors.

Awareness of these lessons and these issues should enable the Nation to do a better job of improving the welfare of farm people in the lower economic brackets, come depression or prosperity. Then, too, measures for the rural reconstruction of war-ravaged countries may be more fruitful if experience in the United States is heeded. The study was restricted to the standard-loan program because, as measured by people or money or geography, this has been the major rehabilitation activity. Thus, the farm-ownership (tenant purchase) and the nonstandard loan programs and the much-debated resettlement-type projects are not in-

cluded in the generalizations given here.

The chief characteristics of the standard-loan program are well recognized. They include (1) *credit* for normal farm and home operating expenses to farm families who are unable to obtain satisfactory financing from any other private or federal source, (2) *supervision* which includes the making of sound farm and home plans, "on-the-farm" teaching of improved farm and home practices, and (3) *rehabilitation in place*—that is, without resettlement. In addition to the combination of credit and supervision which are key parts of every standard loan, other techniques have been adapted or developed to aid the borrowers. These include improvement of tenure, group services, group-health plans, adjustment of debts, environmental sanitation, special types of loans such as for water facilities and 4-H club activity, and specialized programs carried on in limited areas to develop new methods or to meet localized needs. Grants were used extensively during the depression years but are now greatly restricted. Prior to prohibition by Congress, written into the

1944 Agriculture Appropriation Act and subsequent Acts, cooperative associations were assisted and established to aid the rehabilitation of borrowers. Neighborhood action or study groups at one time were given encouragement as an aid to borrowers.

Nearly 770,000 families, one out of every eight farm operators reported by the census, have had a standard loan from the Resettlement Administration or FSA between July 1, 1935, and the end of 1945. (This excludes farm ownership borrowers and project occupants who have also had standard loans.) These families are dispersed throughout all but a dozen counties of the United States. Several counties, mostly in the cotton-plantation areas of the South, have had more than 1,000 borrowers. Counties having the largest proportions of their farmers with such loans tend to be concentrated in the Mountain and Great Plains States, but nearly three-fifths of the total number are in the States that make up the "four Southern FSA regions." Before July 1935, when administration was under FERA and the State rehabilitation corporations, there was no standard-loan category, but probably the majority of the 397,000 families who were made loans would later

have been classified as "nonstandard loan" or "grant only" cases.

Between July 1935 and June 1944 more than 800 million dollars was put out in the form of standard loans to individuals. Direct loans to associations, some or all of whose members were standard borrowers, totaled 22 million dollars during this period. Much of the additional 49 million dollars loaned under FERA would later have been called grants or nonstandard loans.

Some other measures of the scope of the program can be mentioned. More than 27,000 group services were established to provide several times this number of families with needed services or facilities such as sires and machinery. About 4,500 associations of various types were established or given financial or supervisory assistance.

### *Characteristics Change*

Borrowers accepted under FERA had the least in the way of physical and financial resources, had the lowest socio-economic status, and were the most disadvantaged of those accepted at any time. An upward trend in family selection, under way when FSA was started, has generally continued. This means that the "floor" rather than the "ceiling" of acceptance has been raised in prac-

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## *Adversity and Success*

*Man's mettle is tested both in adversity and in success. Twice is this true of the soul of a nation.*

—MME. CHIANG KAI-SHEK

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tice. Wartime objectives accentuated this tendency.

### *Objectives Broaden*

When the program was conceived to perform an emergency function during the crisis of rural relief, the goals for individual families were to relieve their suffering and to restore them to permanent self-support. As the program continued, as understanding grew of the problem of rural poverty, and as deep-rooted causes of poverty were attacked, the objectives shifted and broadened. Stated in somewhat philosophical terms, for the individual family the goals also were to obtain a physically healthful level of living, to obtain a socially desirable level of living, to acquire the skills and abilities needed to manage one's own farm and home successfully and independently, to achieve security, to obtain enough land for an economic unit of the family-farm type, to become a full participant in a democratic way of life, and later, to have maximum employment of the family labor in the production related to the war.

The program has also had broad objectives with respect to agriculture, rural society, and general welfare of the Nation. To save the taxpayers' money was one of the first stated, when the program began in a relief setting—loans plus supervision were viewed as more economical of public funds than either direct relief or work relief. To preserve, reinforce, and perpetuate the family-type farm and to foster farming as a way of life rather than as purely a commercial enterprise have been prominent national goals, along with the encouragement of land conservation.

### *Wartime Influences*

Keeping the maximum number of people on the land was advocated during the early days of the program but this goal was modified and almost reversed by the later aim of achieving full utilization of manpower in the low-income farm population in the production necessary to the war. Discouraging undirected migration of farm population was particularly tied to the problems of man-land adjustment during the drought years. Bringing about a better adjustment of population and land resources was the major attack of resettlement but it is also a goal that has had the support of the standard program. Implied earlier in the whole social-welfare approach, the over-all goal of making available to all of our citizens the opportunities of democracy so they might have a stake in it became more clear-cut under wartime pressures.

These goals for individual families and the larger society have not been concisely stated in any official pronouncement. They are expressed more concretely and are better understood by most people in terms of the working tools used to achieve them—"live at home methods", diversified farming, debt adjustment, tenure improvement, record books, farm and home plans, "precious" cookers.

### *Basic Assumptions*

The objectives rest upon fundamental assumptions which are a complete rejection of the relief philosophy handed down from Elizabethan "poor laws." One other basic philosophical idea came to be pro-



pounded: the resources for lasting rehabilitation rest within the people themselves; therefore, the program must direct its efforts toward tapping and mobilizing these resources. This premise is in accord with the democratic spirit. It stands at the exact opposite of paternalistic and continuous supervision.

### *Measurements*

Successes and failures of the program to date cannot be measured solely in financial terms. Repayment by the end of 1945 of 68.5 percent of the principal involved in "high risk" loans to individuals and groups (excluding "corporation trust" funds) plus interest equivalent to 9.6 percent of the cumulative amount of such loans is not, of course, to be passed over as insignificant. By the end of 1945, 45 percent of the standard borrowers had paid up in full, 7 percent had been dropped as having little hope of rehabilitation or of repaying any more on the loan, and 22 percent were rated as being capable of making further repayments but could not be considered as rehabilitated in agriculture.

Although rehabilitation goals cannot be achieved without financial solvency, it is equally true that every dollar loaned might be collected and yet not a family be rehabilitated. Success in rehabilitation is better shown by families who have better living, improved health, more capital resources with which to earn an income so debts can be retired, more secure tenure, debt-payment schedules scaled to debt-paying capacity, improved farm and home management, better work habits, higher morale, an increased

sense of "belonging" and "being somebody."

Failure in rehabilitation is better illustrated by families whose debts have increased faster than their ability to repay, whose frustrations have been multiplied by program changes and by requirements and objectives they have not fully understood, whose basic problems have not been met because they were not recognized or, being recognized, were not corrected by the supervisors and families, or whose ways of doing after leaving the program revert to the old, and by the establishment, in some instances, of group activities without regard to the natural social processes of organization.

### *Beyond*

Unfortunately, neither the successes nor failures in many important aspects of rural rehabilitation have been adequately measured.

Without doubt, the very existence of the standard-loan program has meant much to the families who have participated. To some the end result was achievement of the goals held out for them, to others the experience was one more flop. Effects of the program also "spilled over" to influence neighbors, local institutions, and organizations. Again, these spilling-over effects have not been measured. But they can be seen in many forms. Pressure cookers and live-at-home practices have changed buying habits. Old patterns of borrowing, buying, and selling have been broken and replaced by new ones. Sanitary facilities and housing improvements of borrowers have been imitated by others. Group action has taught families how to recognize, analyze, and solve some

of their own problems. Health measures to help these families have led to action on health problems of other rural people. Loans and grants which put a floor under the level of living of farm families during the depression years also increased their purchasing power, bailed out landlords and other creditors, and protected the strength of the Nation's manpower resources.

### *The Lessons*

A good many lessons are taught by this experience in rehabilitating low-income farm families. First, it was soon learned that rural poverty was not simply a new depression-born or drought-caused phenomenon but had been growing over a long period and was deeply rooted in a multiplicity of causes. In a sense "rehabilitation" is not an apt word because many families in their generation never were previously at a higher level. A corollary of this first lesson is that many of poverty's causes are outside the direct control of the individual so handicapped. Another is that a complex of problems—not a single problem—is characteristic of families who seek rehabilitation aid and therefore a full kit of tools must be available if the problems are to be met.

Second, the lesson follows that the real meaning of rehabilitation is the attainment of a cluster of interrelated economic and social goals. It is not just paying off the loan, just canning so many quarts of home-produced food per person, just acquiring more working capital, or just getting to participate in community affairs.

Third, one of the most important lessons is the understanding that has

been gained of the nature of the rehabilitation process. All families do not start from the same point and all do not have the same problems; therefore, flexibility is required in the rehabilitation tools and techniques and in their use. One family may need nothing more than a small loan for a short time, with a minimum of guidance. The rehabilitation of another may be a two-generation job, costly in time and money. The speed of the process is decided by (a) family characteristics and resources, (b) rehabilitation aids, (c) the culture—especially as expressed by attitudes, social values, class structure, social institutions and social and economic facilities—within which the family lives, (d) impersonal forces—such as war, flood, or depression—outside the control of the family or the program agency.

Fourth, loans plus supervision, with associated techniques, constitute an invention which can be a powerful instrument of rural social change for the welfare of low-income farm people.

Fifth, several principles have been established concerning the use of the various rehabilitation tools and techniques. A few may be enumerated. The loan must be large enough and for such purposes as will establish the borrower's debt-paying ability if repayment is to be expected. The lower the economic level from which a borrower comes, the more flexible must be the repayment schedule. The lower the status and the more complex the problems of a family, the greater the need for the individualized method of supervision. Families should understand the program before making the decision to

participate. Families who have lived under depressed circumstances and in inferior status for a long time are more likely to need continued supervision than are those whose plight is of recent origin.

### *Possibilities*

Looking ahead, a standard-loan type of rural rehabilitation activity has two possible major roles as a national program. In one role the program would continue to be a positive instrument of social and economic improvement on behalf of the low-income segment in American agriculture. That there is a tremendous need for such a service is indicated by the fact that a substantial number of existing full-time farms are not adequate, as to either size or organization of farm enterprises, to provide reasonably efficient use of the family's labor, or to support a healthful and desirable level of living for the operating family. Advances in technology, the return of veterans to civilian employment, and other factors in the present situation foretell many adjustments in agriculture in the years ahead. Many farmers cannot make these adjustments without assistance.

In the other role, the program could stand by, ready to help farm families who fall into crisis situations because of depression, flood, drought, or other disasters which deplete their resources. It would help them get back on their feet. This is a job which some agency should be ready to do at all times.

In the first role, certain hard facts must be faced—for agriculture and for rural society as a whole.

As pointed out by BAE economists, technology has advanced so fast that foreseeable demand for agricultural products can be met without an increase in farms or farm workers. Yet the rates of farm-population replacement by natural increase are so great that 67 percent more young farm men are reaching the age of 25 during the present decade than are needed to maintain the working force of farm men at 1940 levels; not all could stay on the farm even with no further technological advances. These facts, coupled with the large number of existing inadequate farm units, add up to mean that the agricultural program needs to be supported by broad gauge industrial and educational measures if the problems are to be adequately met. Any such positive program has to face tough problems of family selection. It might find work with part-time farmers to be of increasing importance.

If agriculture plays its historical function of shock-absorber for industry, a depression would bring a back-to-the-land movement and a piling up of people on the land through delaying the migration of so-called surplus farm youth. This would create pressures that might cause a repetition of the mistakes and shortcomings of the early rehabilitation program. On the other hand, a full-employment era would provide an opportunity for constructive work of the type outlined for the first role. Such work could benefit a large segment of our rural population and advance the general welfare of our nation as well.

# Rural Handicrafts— Postwar Possibilities

By M. L. WILSON. *Those who see these handicrafts in their relation to life, whether past or present or future, are the ones who see their many possibilities.*



EVER SINCE we have had recorded history, there have been speculations as to the nature of man.

This can be said of all forms of society of which there is any kind of translatable record. One of the common sets of speculations about man's nature is that man has a spiritual spark in him, and that philosophically this spark responds to beauty and goodness. According to this philosophical concept, the creation of beautiful things by people is an expression of the spiritual element in them.

There is another concept which might be called the modern scientific theory. It holds that, regardless of what man's make-up may be, modern psychology regards the human individual as a whole being which requires balanced development if the heights of greatest accomplishment attainable are to be reached. This new point of view on human development is becoming more pronounced in educational thinking, especially in relation to adult education, which can accomplish much in helping individuals meet the problems of adjustment to the society in which they live.

The rural handicrafts, arts, and skills cover a field which offers more and more opportunity for a

full application of the psychological sciences to healthful living. They afford both a creative element and an artistic element which can contribute to balanced living and all-round health. The handicrafts, like the application of horticultural science in the promotion of individual horticultural skills through emphasis on gardening and farmstead beautification, can bring a response from that spark which is conceived of as an instinctive part of the human soul. For this reason, educational programs that give practical and common-sense leadership to the rural art and handicraft movement are likely to find popular acceptance.

In considering what handicrafts mean to the people of the United States, we must think not only of providing an outlet for the creative spark in man but of meeting the practical needs of rural people. Even though we live in a machine age and are proud of the modern inventions that contribute to a satisfactory farm life, there is a definite need for the further development of hand skills among farm families—skills in making clothing and accessories, home furnishings, food products, equipment, and the many articles that have a place in farm life. The reasons for the skills phase of the

program are obvious and will vary with different individuals. One person may participate in hand work for economic reasons, another will find he can use it best as a hobby and as recreation.

Much has been done by the Cooperative Extension Service in the past 30 years to pave the way for an enlarged rural arts, skills, and handicrafts program. Many needs of rural people have been filled by helping them retain skills handed down from previous generations and helping them learn how to make things that provided comforts and conveniences. Often this could be done through simple bulletins or demonstrations. During the earlier years, before industrial manufacture supplied commonly needed home equipment and conveniences, extension programs included helps in making fireless cookers, fruit and vegetable driers, iceless refrigerators, cheese-making equipment, and other practical articles that made rural life more comfortable. Handicraft articles such as fiber hats, bags, and costume accessories were as important in the clothing program as rugs, quilting, and basketry were in the home-furnishing program.

### *Resourcefulness*

The practical need for this type of homecraft decreased somewhat when industry was supplying similar articles at reasonable prices. But it was interesting to see, during the war, when many articles vanished from the market, a revival of resourcefulness and ingenuity in the home making of equipment needed for farming and farm living. Home-industry projects carried on

by the Extension Service today take into account the practical needs of rural people, according to their background, talents, social standards, farm and home requirements, and their economic conditions.

### *Creative Aspects*

In encouraging handicrafts as psychological and creative outlets, the Rural Arts Exhibition held under the auspices of the United States Department of Agriculture in 1937 did more than any other event to bring to public attention the great importance and wide practice of handicrafts among country people. Much credit is due to Allen Eaton, Director of the Department of Arts and Social Work for the Russell Sage Foundation, for his able contributions and cooperation given the Department in the direction of that exhibition. Under the leadership of Lucinda Crile, of the Extension Service, a Nation-wide study was made, revealing the great variety and distribution of the different crafts.

Unfortunately, these efforts were interrupted by the coming of World War II. The projects helped, however, in focusing attention on the possibilities of occupational therapy in handicrafts for handicapped veterans, and provided trained personnel for organizations working with Army and Navy hospitals. We may now hope to undertake plans for a permanent exhibit of rural handicrafts and the completion of studies begun before the war.

### *Socio-economic Aspects*

The strength and stability of any community lie in the resourcefulness of its people and their ability to find themselves at home in a pro-

ductive sense as well as in the sense of happy living. The rural community is by far a better place than the urban community to live and raise a family on a small income. As rural life in this country settles down to a period of peacetime production, there is outstanding evidence of revival of interest in the development of home crafts and skills.

### *Source of Livelihood*

A natural incentive for many people to engage in handicraft is the desire to use their proximity to raw materials and their ability at craftsmanship as a source of a complete or supplementary livelihood. The farm and countryside provide a wide range of materials for handicraft. Woods, fibers, vines, wools, hides, clays, metals, plants for vegetable dyes and other natural resources are abundant. Couple these with an adeptness in craftsmanship, often inherent in the individual, and many a community or section of the country will find its own "acres of diamonds." Thus, people unable to earn a full livelihood from agriculture can find a supplementary income that will encourage them to stay in the community rather than trek to congested cities or parts unknown for uncertain employment.

Through efforts like the Rural Arts Exhibition, and regional exhibitions which have since been undertaken by sponsoring organizations, progress has been made in the marketing of handicraft products. Buyers of rural-handicraft items who channel these goods to the public, either direct or through established trade outlets, have found considerable demand for genuine Americana

and, during the war, found such wares to be excellent substitutes for the peasant craft of other countries. Recently there have been indications that other countries would sell crafts from America.

The future of rural handicrafts and skills as a source of livelihood will depend a great deal on the successful establishment of handicraft cooperative groups to serve as market outlets between the craftsmen and the buyers. The buying public needs protection against imitations. Labels placed on true handicraft items by a responsible organization, certifying that they are hand-made, will go a long way toward overcoming the skepticism of the cautious purchaser. Then craftsmen need protection against the undue exploitation of a public desire for genuine hand-made products. Organized handicraft cooperatives can protect the consumers against excessive pricing of goods, and at the same time insure fair remuneration for the craftsmen and a continuing consumer demand.

### *Cooperative Guilds*

Several excellent cooperative guilds now operate in these ways. The American Craftsmen's Cooperative Council, whose primary purpose is stated to be the marketing of United States craftsmen's products, is an outstanding organization of this kind. America House through which the Council markets its members' handicrafts, reports that it has done 10 times more business in its fifth year than in its first. The Southern Highland Handicraft Guild, formally organized in 1930, "to preserve and advance the arts and handicrafts of the moun-

tains" has pioneered in craft education. The Southern Highlanders, Inc., established 5 years later, has not only encouraged handicrafts but also small industries. New Hampshire has a League of Arts and Crafts, and other guilds exist throughout the country. Each of the organizations mentioned functions as an educational as well as a marketing agency.

### *Market Possibilities*

The lack of hand-made goods from other countries during the war, coupled with the disappearance from the market of many industrially made gifts, ornaments, and kindred items, was responsible for a considerable increase in the sale of rural handicraft products. For instance, the Rehabilitation Division of the Wisconsin State Board of Vocational and Adult Education, responsible for the operation of a handicraft program for handicapped persons, reports the following sales of Wisconsin homecraft products, through local marketing outlets maintained by the Wisconsin Association for the Disabled, for the last 5 fiscal years: 1940-41, \$9,251; 1941-42, \$19,100; 1942-43, \$26,882; 1943-44, \$43,574; 1944-45, \$62,113. From January 1, 1933 through December 8, 1944, the Southern Highlanders, Inc., and the Southern Handicraft Guild had sales totaling \$806,936. The newsletter for February 1946 from the League of New Hampshire Arts and Crafts reports the sale of \$66,000 worth of handicrafts during the past year.

Besides the economic value of crafts as a source of income for folks with special skills and adjacent to certain raw materials, we must not underestimate their educational im-

portance. Handicrafts offer an opportunity for balanced human development through character training, self-expression, satisfaction in the ability to make things, and fruitful use of leisure time. They are a means for the transmission from one generation to another of skills that might otherwise be lost.

Those of us who have lived through the two World Wars recall that in the first our soldiers became highly respected abroad for their mechanical ingenuity. In the second war, our GI's became world-renowned for the same characteristic. It cannot, however, be regarded as one which "just comes naturally in all American boys." This attribute, like the whole scientific and machine age that has been ushered in during our brief existence as a people, has developed from the beginning in the truly rural setting of colonial democracy.

### *Cultural Pattern*

Our native craftsmanship, like modern mechanics, is the product of the culture known as American democracy, a way of life that has grown up around the hearthfire and the home. Its cradle was, and will continue to be, the love of community, of family, of mutual occupational interest combined to nurture an atmosphere of trust in one's neighbor. The lathe and the last, the spindle and the loom, were as much a part of this culture, as are the family-sized farm and the modern rural community of today. The continuance of this cultural pattern is something to encourage. Programs for the development of rural handicrafts can help toward insuring it in the future.



# Ingenuity

## IN THE *Rice Fields*

By JENKIN W. JONES. *Rice furnishes a concrete example of the way new land and mechanized farming can bring an old crop to fresh successes.*



**SEEDING RICE** by airplanes over the water, harvesting it by combine-drier methods, bulk-handling the rough rice—these are practices that make California one of the most highly mechanized rice-producing sections in the world. Twenty years ago these methods were scarcely in men's dreams. Now they are common practices.

Large tracts of heavy soils bordering on the Sacramento and Feather Rivers are well suited to rice and they make the Sacramento Valley the principal rice-growing area of California. There is ample fresh water for irrigation. The land is relatively level, holds water well, and can be prepared for irrigation and drained at a reasonable cost. High temperatures prevail during the summer, but the growing season is comparatively short. As the temperature is likely to fluctuate widely during the heading and ripening periods, varieties that are tolerant to such conditions are grown. These are early and midseason short-grain varieties, principally Colusa for early harvesting and Caloro for the midseason.

How long has rice been grown in this valley and how much has been grown, is the inevitable first question of eastern readers. It was first

grown commercially there in 1912, on about a thousand acres. By 1920, more than 160 thousand acres were harvested. Then acreage decreased to 90 thousand by 1924, but now it has expanded in response to several stimulants. In 1945 it covered 242 thousand acres of irrigated and profitable land.

Next, agricultural readers will want to know about yields. In a bad year like 1920 the average yield per acre has been as low as 51 bushels. In a good year like 1940 it has been as high as 80 bushels. The 10-year average has jumped from 59 bushels in the first decade to 70 bushels in the decade finished in 1941, with a little hesitation along the way.

In California, rice formerly was sown with a grain drill or a broadcast seeder on relatively dry seedbeds. It was alternately irrigated and drained, two or three times, to supply moisture for germination of the seed and for seedling growth. When the seedlings were 4 to 6 inches high, the land was submerged shallow and the water was gradually increased to a depth of about 6 inches. Thereafter, the land was kept continuously submerged until it was drained, just before harvesting began.

It so happens that this method of irrigation is almost ideal for the growth of weeds. They came and they conquered to an unwelcome degree. They thrive abundantly—particularly barnyard grass. The fields were weeded by hand in an effort to subdue the invaders but they managed to reduce the yields of rice in substantial measure.

### *Seeding Changed*

Something more drastic had to be done. The Biggs Rice Field Station furnished one answer. Experiments there demonstrated that barnyard grass could be effectively controlled. Two methods were worked out. The rice could be seeded broadcast on a well-prepared seedbed and the submerging of the land could begin immediately and be kept up continuously. Or, if preferred, the land could be submerged first and then the seed could be broadcast on the surface of the water, which should be from 4 to 7 inches deep. Water was to be held on the land thereafter until harvest time.

The explanation was that rice seed when resting on the surface of the soil beneath the water quickly germinates, the roots then penetrate the soft mud, and the first leaf stretches up through the water. It often floats

on the surface, but the other seedling leaves emerge with more strength and stand erect, or almost erect. Meanwhile the seedlings of barnyard grass are unable to push up through the water, so they eventually die.

These two methods—seeding and then continuous submergence, or seeding after submergence—are standard practices in California. This is true in the Sacramento and San Joaquin Valleys and in the Imperial Valley where rice is grown mainly as a reclamation crop on alkali lands.

### *Airplanes At It*

Airplane broadcasting of the seed on the surface of the water is now a common sight over these submerged fields. The rice is seeded on water in strips about 30 feet wide at the rate of about 50 acres an hour. A single-motor plane is used that has a built-in hopper with a capacity of about 600 to 800 pounds. The plane flies at an elevation ranging from 20 to 100 feet over flagmen stationed in the field who change position after each strip is sown.

### *Harvesting Changed*

In earlier years practically all rice in California was harvested with binders and shocked in the fields. After curing in the shock about 2 weeks the crop was threshed with stationary threshers, was sacked and stored. Practically all the binders had small auxiliary engines to operate the cutting and binding mechanisms, and were pulled by small tractors or horses. Later these engines were replaced by power-take-off attachments from tractors which pulled the binders.

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## *Futile*

*It's but little good you'll do  
watering last year's crops.*

—FROM ADAM BEDE

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# Right Now

*Today's farmer is one of the most power-minded enterprisers on earth. He has about two million tractors and would like a lot more. . . . Farming has become a ninety-billion dollar industry, with a cash income from sale of products not counting food consumed at home, now at the twenty-billion dollar mark.*

—CLINTON P. ANDERSON

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Even so, each year large numbers of temporary workmen had to be brought in, and many additional wagons and considerable other equipment. This was cumbersome, expensive, and uncertain. Again these rice growers sought more efficient methods, for the costs of the crop were increasing perceptibly.

## *Let's Try*

Combines seemed to be the answer this time. They had been used for years in harvesting small-grain crops all through the West. Why not rice? In 1929, a year notorious for far different reasons in the East, combines were tried on about 3 thousand acres of windrowed rice in the Sacramento Valley. Satisfaction was so great, from the growers' standpoint of reducing the need for additional labor and equipment, that in the next year 25 thousand acres were harvested with combines, and 35 thousand acres the year after that. The combines had pick-up attachments to elevate the windrowed rice into the thresher.

There were other satisfactions—and some drawbacks. Moisture content of the kernels was so reduced that safe storage was possible without artificial drying, but the rice harvested in this way was often of poor milling quality because the curing in the windrow was often uneven or otherwise inadequately done. This meant a lower market value for the rough rice.

## *Something More*

Again improvement seemed imperative. This time an individual progressive farmer brought the answer. Mechanization again. He imported a rice drier from Italy and installed it at East Nicholas. This drier made it possible to combine direct and then dry the rice artificially. This combine-drier method saves labor, time, and exposure to adverse weather. It soon became the usual thing in the Valley. It is now also being used considerably in the southern rice fields, particularly in Louisiana and Texas.

The crop is combined when the maturing grain contains from 20 to 28 percent of moisture. It is hauled directly to the driers in bulk, where it is dried under controlled temperature conditions. It is passed through the driers two or three times thus gradually reducing the moisture, usually to about 14 percent. Between runs, the rice is stored in bins for 12 to 48 hours as this permits the moisture to become equalized within the grain. When this process of drying is properly done the milling quality is even better than that of rough rice threshed from shocks.

Driers are of various types and capacity. Large motor-driven fans force the warm air, heated usually with butane burners, through vertical or horizontal layers of rice as it moves through. During the harvest these driers operate day and night.

Meanwhile the combines in the Sacramento Valley have kept pace with improvements elsewhere. They may be either the self-propelled or the pull type. They cut swaths up to 21 feet. Both kinds are mounted either on large rubber tires or on crawler tracks and are operated

by crews of two or three men. They are equipped with grain bins and, under favorable conditions, dump-trucks enter the fields and are loaded by gravity directly from the combine bins. When the condition of the land makes it inadvisable for trucks to come on the fields, large bank-out beds, mounted on crawler tracks and drawn by tractors, receive the rice from the combines and deliver it to dump-trucks at the roadside. These bank-out beds have sloping sides, a screw conveyor centered in the bottom, an elevator spout at the back. By means of a power take-off attachment from the tractor to the conveyor the rice is rapidly elevated from the beds into dump-trucks, which deliver it to the driers.

Here is an ancient crop that proverbially is grown and harvested in large part by ancient hand methods in ancient lands. Yet when it is grown on new lands by progressively new methods it responds in gratifying fashion. In our own country we have now twice shown this to be true as the crop has worked its way westward from our southeastern lowlands.

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*We Americans are at our best when we have a hard job to do. The bigger the job is the better we do it—provided that the purpose is clearly defined. When we are thus challenged we plan better, work harder, and produce more than any other people who have lived on this earth. In peace, too, we have achieved similar industrial miracles. We must never forget that the genius of America has always been best expressed by the four simple words—All things are possible. And to me, the greatest miracle of all has always been the casual way we take our miracles for granted.*

—HENRY A. WALLACE, in *Sixty Million Jobs*,  
(Simon and Schuster)

# Wood-Farm Crop

## with New Outlets

By J. A. HALL. *When we asked what new is going on in the Forest Products Laboratory we got an immediate reply. Probably there is always something new there—a quarterly magazine can scarcely hope to keep up with it.*



TO ME the ideal farm is found in the older settled parts of the country that men divided conveniently for occupancy before the development of that iniquitous rectangular system of survey. They laid off the land by "metes and bounds" in farms that included plow land and pasture and woods in good proportion, and put the house and barns at the foot of the slope so the products of the land flowed easily to the farmstead. Here was the industrial center, the place of handicraft manufacture that supplied most of the family needs from the produce of the land, and prepared for market the surplus above requirements on the farm.

It is a far cry from that to the industrialized, gadgeteered, and economics-ridden farm economy of today, but as long as love of the land persists in the hearts of men, that age-old combination of woods, pasture, and plow land will still constitute a farm.

What of the woods on the farm? Four million farmers own 139 million acres of commercial timber land, a potential empire in itself, nearly three times the total productive forest area of Sweden. But it is pretty universally agreed that this potential empire of forest does not produce

near the volume of goods and opportunities for gainful employment that it is capable of yielding. Why?

One school of thought holds that the principal need is instruction in the arts of silviculture, education in forestry so that management of the woods can become as well based as management of the fields. It is held that this will in itself bring about the growth of volumes of saw timber, pulpwood, and other products that will insure continued good management of the woods.

But the farm does not consume its basic and most profitable wood products. It needs posts and firewood and poles and some lumber and plywood. It cannot manufacture lumber and plywood well nor fabricate its lower-quality material into profitable goods within its own economic structure. Rough lumber for some farm use can be and is manufactured on the farm, but generally, the farmer sells logs and buys lumber. His posts and firewood should come normally as a part of the processes of growing and harvesting his major timber crop, logs for lumber, pulp, and veneer. Personally, I don't think farm forestry can ever get very far if it depends on the farm wood-lot owner consuming the major part of his wood crop on

the farm. If he can sell it and receive an adequate income from it, he will be interested in maintaining it.

This brings on a discussion of markets for the wood from the farm wood lot and the things that have happened in recent years to modify the outlook. The situation is far from uniform, of course, because there is a vast difference between the pineries of the South, the hardwoods of the Appalachians and Middle West, and the Douglas-fir of the Northwest. But there are some things that are common to the important forest regions. One thing is the growing realization that balanced and integrated utilization of the forest crop is the surest way to keep the forest growing productively. The most important difference between forest crops and other crops lies in this fact—the method of the harvest goes far in determining the quality and amount of succeeding crops. Let me explain:

### *Integrated Use*

Most woods are composed of several species of trees, each of which, like all other plants, has its own peculiar preferences as to conditions under which it will reproduce and grow well. Not all species have equal value or use as wood. Normal procedure has been, therefore, over too much of the country, to cut the species in demand and leave those that had low value. The net result has been a steady alteration in the species composition of a great deal of woodland toward low-value trees. If we had cut evenly of all species, or more heavily of the lower qualities, the composition would be altered toward

higher value instead of being degraded. Now, any silviculturist would call that a greatly oversimplified statement, which it is, but it also happens to be a fairly true statement.

The same general sort of statement can be made about *quality* of trees as about species. The ideal lumber tree is straight and tall and free from limbs for a long way up from the stump. Unfortunately, trees don't all grow that way and the geneticists haven't gotten around to breeding strains that are as uniform, for example, as hybrid corn. So we have cull trees of low value that take up space and prevent the growth of good trees.

### *Use for Low Quality*

Utilization research is focusing a great deal of attention on these two phases of the problem, the utilization of lower-quality species and lower-quality trees, and there has been some progress.

Down in Knoxville there is a new kind of factory that takes low-grade oak, cuts it into thin boards, puts the knotty stuff in the middle, sandwiched between thin slices of clear wood, and builds up a serviceable floor panel. The Forest Products Laboratory and TVA worked out the process and TVA is operating it. It may offer a satisfactory method of using the large quantities of low-grade hardwoods.

At the Forest Products Laboratory there are some interesting developments in the manufacture of panels from short-length wood for use in ordinary construction. It has seemed a little unnecessary to have siding, weatherboarding, and such lumber cut always in long boards. After

all, it is usually nailed up on studding spaced at a standard distance. Why not make ready-made panels of standard width also and fit them into the standard width between the studding? It works, and pretty well, too. The beauty of the thing is that these panels require only short pieces, 16 inches, and these can be cut clear in between the knots and rotten spots in otherwise cull logs. Not only that, their manufacture requires no complicated machinery and would be quite suitable for small local industry.

Then there are new pulping processes that use almost any kind of wood, so-called semichemical processes that give usable pulp from species formerly considered unsuitable for pulping. The location of mills using these processes in timbered regions will open up markets for a lot of wood that has gone unused.

### *Yeast From Wood*

The Forest Products Laboratory is investigating a very interesting process for manufacturing feeding yeast from wood. This would be a high-protein yeast and highly suitable especially for poultry feed, as well as for livestock. The original process was being developed under Dollfuss, in Austria before the Nazis moved in. He had the idea that the wood in the hills could be used to help the feed problem of

the small farmer. Technically, he was right; economically, we don't know much about it yet. But the idea is certainly attractive. If we can work out a simple process by which poor-quality wood can be transformed to sugar and then grow yeast on that sugar, and do the whole thing cheaply, we shall have made a tremendous advance. New England and upper New York and the Lake States, and the Northwest, and the Rocky Mountains would have a source of protein feed within their own economy. The process must be simple—no more complex than running a creamery—so that local folks can do the job.

### *Small Tracts*

These are technological matters, but there is another field of equal importance in which a great deal of exploring needs to be done. Let's call it "Economic Organization for Forest Production," and explain it thus: We've got to find ways in which owners of small tracts of woods can be assured of a market through permanent utilization facilities permanently available to them. Further, technical forestry assistance must be available to them in order that their forest practices continually yield material to keep the utilization facilities going.

These are the two sides to an old problem. I hope to live long enough to see some progress made on its solution.

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*And they shall build the old wastes, they shall raise up the former desolations.*

—ISAIAH 61:4.





## Books

TOMORROW WITHOUT FEAR. By *CHESTER BOWLES*. Simon and Schuster. New York. 88 pages.

IN THIS BOOK Mr. Bowles charts a course for the American economy which he feels certain will maintain full employment at progressively higher levels of living for all our people.

There are five key points in his reasoning. (1) America occupies a dominant place in the world economy and its economic policies are not only of great concern to its own citizens but also to people throughout the world. (2) Total spending by Government, business, and consumers, equals our national income; hence, a high level of spending must be maintained if full employment and high national income are to be maintained. (3) The Federal Government is the only institution capable of underwriting a full-employment economy and should do so at once. (4) The private-enterprise economy should be preserved; hence, the Federal Government must exert its influence to see that most of the necessary spending is the outcome of active private enterprise. (5) This influence should be exerted by promoting through collective bargaining a higher level of wages in relation to prices, by encouraging fair competition, by expansion and improvement of public facilities and services, by adequate support of farm incomes, and by expansion of international trade. As Mr. Bowles

points out, the main ideas have appeared before in other publications.

The great merit of the book, in the words of another reviewer, is that "it is written in language the layman can understand." For one who disclaims being a "professional writer" or "a practicing economist," Mr. Bowles has done a brilliant job of putting in simple language the Keynesian explanation of depressions and their cure.

But there are a few points in his common-sense exposition concerning which the skeptical layman might ask for further clarification. He says that businessmen periodically reduce their spending because of "a thousand and one things." Would it have been possible to explain this a little more clearly? And when he says that if the Government will follow his proposals, the Federal budget could be balanced over a period of years, some will surely wonder whether that period might not be too long. It is doubtful whether this problem as it relates to the Federal-debt bugaboo can be explained to the satisfaction of skeptical laymen. In any case, Mr. Bowles' effort seems to have been one of the best yet made.

Despite the general optimism, he indicates at many points doubts as to whether the American people will, in fact, follow his proposals.

—*Bushrod W. Allin*

EDUCATION FOR USE OF REGIONAL RESOURCES: RESEARCH TRANSLATION AND REGIONAL RESOURCE USE EDUCATION. Sponsored by the Committee on Southern Regional Studies and Education of the American Council on Education. (Washington, D. C.) 129 pages.

THE COMMITTEE on Regional Studies and Education, formed by the American Council on Education in 1943 to search for ways of obtaining the translation of significant research findings into useful instructional materials for schools, now issues this second report. Its first report *Channeling Research Into Education*, summarized the Committee's efforts up to and including the Gatlinburg Work-Conference held in 1943.

The present volume is an attempt to share the experience of the 1944 Conference with the largest possible number of educational and research specialists. About 100 representatives of State and regional agencies for education and research attended. State participants included: college presidents, State superintendents of education, deans of education, Directors of State planning boards, conservation departments, and State education associations, and research specialists in economics, forestry, agriculture, biology, population, and labor problems. The regional representatives were from research organizations, regional offices of federal agencies, and professional educational associations. Among consultants were Paul B. Sears, Oberlin College, Harcourt Morgan, TVA, and Howard W. Odum, University of North Carolina, Editor of *Social Forces*. These men prepared materials for the conference and entered fully in discussions with the conferees.

Perhaps most readers will find the contributions of these special-

ists which appear in Part II *The Specialists Speak on Resource Use and Regional Development* the freshest and most stimulating part of the volume. These 42 pages in themselves are a good example of the translation of specialized knowledge into lay language. They deserve to be widely read by all who are concerned with the effective use of resources, whether they are engaged in education or research.

Parts I and III will be of interest primarily as a report for conference participants. They offer abundant evidence that a generous degree of energy went into advance preparation for the conference—and that during the meetings subcommittees worked industriously. But readers who did not attend the conference may question the proportionate emphasis on conference mechanics in relation to the materials which deal with the actual substance of the problem.

In *Channeling Research Into Education* and in this *Education for Use of Regional Resources* the Committee on Southern Regional Studies and Education has outlined a problem which is of national significance. It is worth noting that the increasing activities in resource-use education in the Southern States are currently reported in the newsletter "Resource-Use Education," the first number of which was issued from the Committee's office in Chapel Hill, North Carolina, in September 1945.

—Mary U. Rothrock

COUNTRY FLAVOR. By HAYDN S. PEARSON. Whittlesey House.  
New York. 112 pages.

DISCRIMINATING readers will find joy in this modest volume for it is a thing of beauty as to format, printed page, pictures, and the choice and precise English in which the author writes of the country scene and country life. Haydn Pearson knows country life with all his faculties, and he has given us word pictures that will not soon be forgotten. The illustrations—29 of them by three artists—are perfect companion pieces to the short essays, and beautiful in themselves. The author evidently has artist friends who feel just as he does about country life but who register their love for it through a different medium. The author draws word pictures to linger in the mind's eye when he writes of the red-gold of October, the browns of November, the greys of December, and the lingering scarlet sumac plumes—"a splash of color on the painting of winter."

The high point, however, for most readers who know farm life, or would like to, lies in the fair and just description of the farm tasks—picking stones and carrying them off in a "stoneboat," the good work of plowing which makes one glad that he lives in the country "where a man's eyes can rise to beauty," swinging a scythe for "to watch a master mower in action is to see the poetry of motion," "raking after," milking, cut-

ting and hauling wood and many other operations.

Throughout, the country life described is New England, though many aspects of it are common to country life elsewhere. The most characteristically New England, are the essays relating to culinary matters—"Red flannel hash . . . is a taste tantalizing dish . . . its color is exciting . . . it has allure and snap." How to make it? An exact recipe follows. The decline of beef stew brings "perturbation" to the author. "The making of beef stew should be approached in a leisurely manner and with full concentration. . . . If one is disquieted about the stock market he cannot receive all that beef stew has to offer." Then follows the recipe. "After the stew is cooked it should be set aside to cool. It is the re-heating that brings out all the subtle nuances, the utterly delicious and the completely satisfying flavor."

Those who believe that the types of agriculture practiced in the United States have had a great deal to do with the evolution of the strength, self-reliance, and endurance of the American character will find much to support this belief in this small volume and at the same time will provide themselves with a few hours—too few—of pure delight.

—Mary G. Lacy

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*The greatness of a people is no more affected by the number of its inhabitants than the greatness of an individual is measured by his height. Whoever presents a great example is great.*

—Victor Hugo

SUCCESS ON THE SMALL FARM. By HAYDN S. PEARSON. McGraw-Hill Book Company. New York. 285 pages.

"A BROOK OF OUR OWN"—A FEW NOTES FROM THE FILES OF A MOUNTAIN REAL ESTATE OFFICE. By MARJORY GANE HARKNESS Alfred A. Knopf. New York. 200 pages.

HAVING READ Mr. Pearson's countryman pieces in the New York Times, one expects a certain flavor of romance from him on this subject of farming. But the avowed mission of this book is to set forth a practical, definite blueprint for making a net cash income of \$2,000 to \$3,000 a year on 6 to 10 acres.

The core of the blueprint is a Six Months Plan. You work hard from May to October raising and selling asparagus, strawberries, raspberries, sweet corn, melons, and squash, in that order. The other 6 months you can take it easy. You sell in a roadside stand, preferably. There is a chapter on each crop: Strawberries \$500 an acre, Asparagus \$500 an acre, and so on; and he tells you how to do it. There are pointers for beginners, and other considerations. Incidentally, a chapter on dairying, probably the weakest, gives advice which, if faithfully followed by novices, would probably leave nine out of ten broke and disillusioned in 5 years. There is a self-testing score card, so you can tell whether you are cut out to be a farmer.

Strong points are the excellent style of writing, the straightforward attempt to spell out an over-all business plan for a small farm, and the giving of detailed know-how of handling the crops. It displays more than ordinary insight and common sense on many farm matters. Its weakness lies in its confident promise of good income from the plan; its lack of due emphasis on capital, lo-

cation, experience, and other vital requirements; and its failure to give due weight to pests, crop failure, repairs that can close the highway (and trade) for weeks; occasional low prices; and other unforeseen hazards.

Summed up, amid the flood of how-to-farm-it books, this stands out among the good ones. It is practical on most details and it is pleasant reading.

SNUGLY NESTED in the mountains of New Hampshire, a feminine Yankee traffics in the capital goods of that region: Brooks, ponds, blueberry hillsides, vistas of Chocorua and the Sandwich Range. She receives much eager wampum from Boston, Baltimore, Florida—teachers, summer-homers, back-to-the-landers—satisfying their yearnings. Manifestly, a business of pleasant adventure, not to mention the ten percent.

Mrs. Harkness now has made her files yield this additional dividend, and a sprightly little book it is. Well, written, entertaining, presumably all true. But perhaps there's just one little note here that may grate gently upon some souls, like a discord in Lohengrin. If you've paddled incomparable Winnepeaukee, fished the Rocky Branch of the Saco, or climbed the horn of Chocorua, you may feel slightly disillusioned at hearing Eden evaluated by a realtor—even an understanding realtor.

—A. B. Genung

ECONOMIC RECONSTRUCTION IN YUGOSLAVIA. A PRACTICAL PLAN FOR THE BALKANS. By *GEORGE RADIN*. Published for the Carnegie Endowment for International Peace, by King's Crown Press. New York. 161 pages.

ASSISTED BY EXPERTS in the fields of agriculture, economics, rural power development, cooperative practices and education, who are not named because they are employed by the U. S. Government, George Radin has written a book that is a valuable contribution in the field of rehabilitation. It will be even more valuable as a guide toward long-range reconstruction, as many of the projects outlined could hardly be developed and completed in a few years, even under more satisfactory conditions than those prevailing today.

The preface by an eminent authority on international relations, Dr. James T. Shotwell, of Columbia University and the Carnegie Endowment for International Peace, stresses the value of the *zadrugas*, the old patriarchal family system of the Slavs upon which much of the modern Balkan cooperative system is based, as agencies for carrying out the recommended practices. Mr. Radin's vivid description of reconstruction problems facing Yugoslavia and his experiences in this field after World War I make a pointed introduction to the problem.

The book contains 17 projects ranging from crop improvement and

poultry management to farm home living and rural health improvement. Technically, these programs are admirable. They are written from an American's viewpoint, however, and the examples are drawn from this country.

A brief chapter, "A System of Agricultural Education and Research after an American Model," merely outlines in an effective though general way what has been done in the United States. It might have included examples of the numerous successful research and extension projects actually carried out by the scientists and peasantry of Yugoslavia and other Balkan countries, for outstanding achievements have been secured in some of the fields covered by the proposed projects. They would have enriched the book, made the 17 proposals more meaningful, and given Yugoslav scientists and farmers due credit for past achievements won with admittedly inadequate resources. Despite these omissions the book merits the careful reading of those who are interested in rehabilitation and reconstruction.

—Clayton E. Whipple

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*The shortage of books in the world today is tragic. . . . All good books throughout the world must now be cherished, none wasted. We must collect them, place them where they will do the most good . . .*

—VIRGINIA GILDERSLEEVE

GOD MADE THE COUNTRY. By EDWIN TOWNSEND BOOTH. Alfred A. Knopf. New York. 330 pages.

THE MAIN THEME of this delightful and stimulating volume is the significance of the rural way of life for the classic literature of European civilization and the meaning of this way of life for some of the outstanding creators of this literature. The author points out that European literature began with Hesiod, the dirt farmer of the eighth century B. C. who composed *Works and Days*, and that from Hesiod to the present the soil has nourished mankind both physically and spiritually. Much has been said in a general fashion about the farmer as the base of civilization, but it has remained for this study to sketch in broad expanse the relationship of the earth to the works of men of letters.

This series of essays in literary history and criticism reinterprets the lives and works of several of the main figures in literature with reference to the author's main theme. The writers are considered in chronological order, beginning with Hesiod, Xenophon, Horace, and Vergil and concluding with Emerson, Hawthorne, Melville, and Tolstoy. There are essays concerned with Ausonius, Sidonius, Madame de Sévigné, Voltaire, Alexander Pope, Horace Walpole, Thomas Gray, Lord Bolingbroke, James Thomson, Lady Mary Wortley Montagu, William Cooper, the Wordsworths, the Carlyles, Thoreau, and Alcott.

Many of the seemingly austere and vaguely understood figures of our

literature courses here become human beings when delineated with reference to the rural settings where they did much of their creative writing. Few realize that Voltaire spent more than forty years of his long life in the country. Lady Montagu among her bees, silkworms, and grapevines is a distinct contrast from the traditional portrayal of her as a bluestocking in the drawing rooms of London and the salons of the Continent. The Carlyles at Craigenputtock cease to be gloomy and forbidding. The titanic craftsman of *War and Peace* is revealed as an enthusiastic and genial country gentleman. Perhaps most striking of all the reinterpretations is the portrayal of Melville as he lived within view of beautiful Mount Greylock while he created *Moby Dick*.

As implied in the title, the book includes a philosophical defense of the virtues of rural living. Some readers will contend that certain of the writers here considered sought refuge in country quiet because of economic necessity or otherwise, and not primarily because they had experienced all that urban and industrial life had to offer and had sickened of it. Regardless of what the individual reader's reaction may be to the manner in which this philosophical theme is treated, the book deserves to be read, re-read, and re-read again.

—Everett E. Edwards

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*Seasoned life of man is preserved and stored up in books.*—Milton

SELECTING AND OPERATING A BUSINESS OF YOUR OWN. By GUS LARSON, ROBERT H. JOHNSON, and WALTER M. TELLER. Prentice-Hall, Inc. New York. 364 pages.

HERE IS a straight-forward, simply but well-written primer covering not only small urban enterprises, but also rural business and farming opportunities. Its diversity and time-and-effort-saving suggestions make it a valuable current addition to the numerous Government manuals and other publications designed primarily for service veterans and others who are planning to establish and operate a farm or small business. Its coverage is greater than its depth; nevertheless, a serious study of the book would reduce the number of failures.

Following several chapters of generalizations on basic and important essentials, the authors give fairly detailed pointers, ideas, and practical helps about a wide variety of businesses, many of which are indirectly related to the distribution of agricultural products, such as grocery stores, bakeries, apparel shops, restaurants, and saw mills. Problems of planning, location, facilities, buying and selling, advertising, labor, legal assistance, and record keeping

are briefly discussed for each type of business.

A discussion of farming in general, part-time farming, farm-service business, and agricultural opportunities in Alaska takes over the latter part of the book. The chapter on farming as a small business includes brief discussions on the aptitudes of the prospective farmer, kinds of farming (truck, poultry, fruit growing, dairying, stock farming, cotton, diversified, ranching, etc.) capital requirements, and possible income. The advantages and pitfalls of combining a little farming with a job or business are reviewed. A comparatively new field for small business is described—farm-service business including dusting and spraying services, well drilling, trucking, conservation work, rural electrical servicing and sales, farm building and repair services, and machine shops. The authors point out the limited farming opportunities in Alaska.

A short list of books and pamphlets for additional reading is given at the end of each chapter.

—Floyd J. Hosking

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## FOOD STILL FIGHTS FOR FREEDOM

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SOUTHERN HORIZONS. By WILLIAM HAYNES. D. Van Nostrand Company, Inc. 250 Fourth Ave., New York. 316 pages.

SOUTHERN HORIZONS is a book about the wonders—past, present and future—of chemurgy. According to its author, chemurgy means agricultural production for industrial uses and, he says, the South has been making its living out of it since colonial times. Actually, the book deals with many raw materials other than those which are the products of our farms—sulfur, helium, phosphate, bauxite, barium, mica, magnesium, iron, and coal. All together they give quite a glow to Southern Horizons.

In this descriptive and interesting volume (easily read in an evening) the author takes as his theme "Southern resources developed by Southerners for the benefit of everyone." The book, he says, "needed to be written," if for no other reason than to call attention to "the new spirit that today inspires the South." It is just as well that it has been written by "a Damyankee from Connecticut"—especially one with the qualifications of Mr. Haynes. Southerners are too modest to tell the truth about their resources and non-southerners would not believe them if they did.

Three chapters are devoted to cotton and its competitors, two to oil crops, three to products of our forests, and one each to mineral ores and water power, gas and oil, silk and ramie. A chapter on "Chemical Treasure Trove" is a fascinating summary of almost unbelievable accomplishments through industrial

chemistry in the South and even greater things to come. Closing chapters reveal some ideas in the making and emphasize that education and research are the solid foundations on which the future of the South—or any section—must be built.

In spite of several inaccuracies the opening chapter "Revolution in the South," is to this reviewer the most significant in the book. Fred McDonald's quoted contrast of Southern and New England business methods is a masterpiece in description. The new spirit being created in the South here characterized as "quite the most important change—in the past two decades, possibly the greatest change since the bitter days of Reconstruction," is undoubtedly the principal feature in the southern horizon and overshadows any chemurgic development, actual or in prospect.

The thoughtful observer, however, finds it difficult to believe that the war "brought more new jobs and fresh dollars to the South than to any other region" or that "most Southerners, in all sections and from every stratum, reject scornfully the entire New Deal philosophy." The critical comments with respect to "TVA's well advertised successes" and the lengthy diatribe against "Government research" appear to be both far fetched and unwarranted.

—G. H. Aull

IN THIS attractive small book there is a wealth of interesting and at times useful observations and comments by a naturalist who has had a long career as teacher of forestry and conservation. Forty years ago he was professor of forestry in Cornell University. Now, in a climate "tropical" by contrast with that on the shores of Lake Cayuga, he is Professor of Tropical Forestry and Conservation in the University of Miami.

The author seems to give the impression that he is writing for all the forested regions of low latitudes and altitudes, with high rainfall—the "humid tropics." However, such statements as "residents of tropical Hispanic-America who understand the area in which they live do not try to maintain lawns" suggest that his experience in tropical regions has been limited to older settled portions. But he gives sound advice when he says "To succeed in living in the tropics, settlers from the North must adapt themselves to new surroundings, rather than attempt to change the surroundings to suit themselves."

There are stimulating suggestions as to "subsistence silviculture" on forest farmsteads. The author also rightly emphasizes the place of trees in "tropical" land use, and the importance of forest tree—forest soil relationships, pointing out that transition from wild forest to planted

forest should, if possible, be made without seriously disturbing the soil. This is particularly true in the humid tropics proper where the soil, after the "wild" forest has been cleared, may be almost sterile. But I doubt that Dr. Gifford has experienced or seen the terrific difficulties of a white settler in humid tropical virgin-forested regions where the transportation is limited, for example, to a hollowed-out log, paddle-propelled, on a treacherous river. Is not he really writing about and for the well-to-do, or at least well-set-up, American who is living in Florida?

Ownership of the land by those operating it is emphatically endorsed by the author. To those who have seen some of the appalling consequences of the relationships between the landed gentry and the peons in such countries as the Philippines, which have had the Spanish cultural traditions imposed upon them for centuries, this question is of particular significance.

In conclusion: Dr. Gifford's stimulating consideration of the extremely important subject of "living by the land" would be more helpful and less misleading if he had written more exactly as to regions, rather than attempting to treat of "tropical" regions as a whole when he was really writing for Floridians—would-be and present.

—Robert L. Pendleton

LAND TITLE ORIGINS. By ALFRED N. CHANDLER. Robert Schalkenbach Foundation. New York. 550 pages.

CONCENTRATING on the social and economic aspects of the origin, nature, and transfer of property rights in land, this volume provides a needed supplement to the histories of the colonial period.

Beginning with the exploration of America, land rights were established through prior discovery and force. Land, either claimed or unclaimed by the Indians, quickly became the personal property of European monarchs who with "the mere scratch of a goose-quill" transferred it to court favorites or others who would contribute to the aggrandizement of the Mother Country. The author's thesis that "mass migration of Europeans to America was caused, not by widespread desire for religious freedom as often declared, but, as here shown, by craving for land, and to escape the poverty in Europe emanating from feudalism" is carefully developed and well stated.

Tenure systems in each of the original colonies and special sections like Texas and the Oregon country, constitute the body of the volume. The terms "indentured servants," "quit rents," "land speculation," "land frauds," "unearned increment," and "land grabbers" suggest the topics emphasized throughout the study.

The content of the book is considerably broader than the title would indicate. Origins of Land Policies would seem to be appropriate to the materials presented. The sub-title used, *A Tale of Force and Fraud*, is indicative of a prevalent undertone, yet the general tenor of the analysis is rather objective. Studious attention is given to detail and there are 174 bibliographical references. The Epilogue contains forceful quotations from statesmen and writers that are of value to students of our landed institutions.

—John F. Timmons

*We can gain no lasting peace if we approach it with suspicion and mistrust—and with fear. We can gain it only if we proceed with the understanding and confidence and courage which flow from conviction.*

—FRANKLIN D. ROOSEVELT

